Instructions - Parts List

4-Ball Lower Retrofit Connection Kits

311876F

EN

Connection kits for 4-Ball Lowers. For professional use only.

Important Safety Instructions
Read all warnings and instructions in your pump **Operation** manual. Save these instructions.

See the **Connection Kit Usage Charts** on pages 2-5 to select the correct connection kit for your lower and motor. A Shield Kit may also be required. See manual 406876 to order the correct shield kit for your pump.

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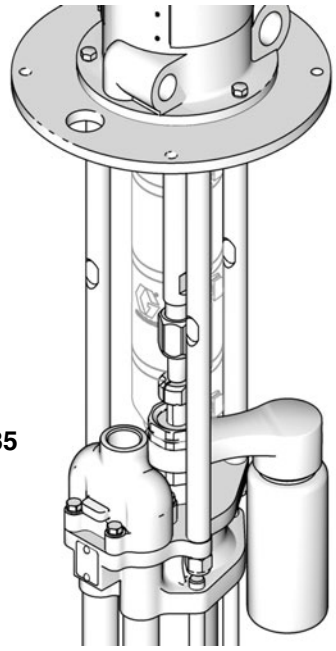


Connection Kit 24J185 shown mounted on a President air motor

TI16810a

Connection Kit Usage Chart for President® Air Motors, E-Flo® DC Electric Motors, and Viscount® I+ Hydraulic Motors

Refer to the following chart to select the correct Connection Kit for your pump lower and motor.

Pump Lower Part No.	Pump Lower Size (cc)	Connection Kit Part No. (see page numbers)			
		President	President (stubby size)	Viscount I+	E-Flo DC
24F413	750	24J185 (24-26)	24J186 (24-26)	24F065 (27-29)	288209
24F414	750	24J185 (24-26)	24J186 (24-26)	24F065 (27-29)	288209
24F415	750	24J185 (24-26)	24J186 (24-26)	24F065 (27-29)	288209
24F416	750	24J185 (24-26)	24J186 (24-26)	24F065 (27-29)	288209
24F420	750	24J185 (24-26)	24J186 (24-26)	24F065 (27-29)	288209
24F421*	750	24J185 (24-26)	not recommended	not recommended	not recommended
24F422*	750	24J185 (24-26)	not recommended	not recommended	not recommended
24F423*	750	24J185 (24-26)	not recommended	not recommended	not recommended
24F424	1000	24J185 (24-26)	24J186 (24-26)	24F065 (27-29)	288209
24F425	1000	24J185 (24-26)	24J186 (24-26)	24F065 (27-29)	288209
24F426	1000	24J185 (24-26)	24J186 (24-26)	24F065 (27-29)	288209
24F427	1000	24J185 (24-26)	24J186 (24-26)	24F065 (27-29)	288209
24F431	1000	24J185 (24-26)	24J186 (24-26)	24F065 (27-29)	288209
24F432	1500	24J185 (24-26)	24J186 (24-26)	24F065 (27-29)	288209
24F433	1500	24J185 (24-26)	24J186 (24-26)	24F065 (27-29)	288209
24F434	1500	24J185 (24-26)	24J186 (24-26)	24F065 (27-29)	288209
24F435	1500	24J185 (24-26)	24J186 (24-26)	24F065 (27-29)	288209
24F439	1500	24J185 (24-26)	24J186 (24-26)	24F065 (27-29)	288209
24F440	2000	not recommended	not recommended	24F065 (27-29)	288209
24F441	2000	not recommended	not recommended	24F065 (27-29)	288209
24F442	2000	not recommended	not recommended	24F065 (27-29)	288209
24F443	2000	not recommended	not recommended	24F065 (27-29)	288209
24F447	2000	not recommended	not recommended	24F065 (27-29)	288209

* *Drum mounted pump lower with open wet-cup and spring loaded packings.*

Pump Lower Part No.	Pump Lower Size (cc)	Connection Kit Part No. (see page numbers)			
		President	President (stubby size)	Viscount I+	E-Flo DC
253033	1000	288504 (17-19)	24J186 (24-26)	24F065 (27-29)	288209
253034	1500	288504 (17-19)	24J186 (24-26)	24F065 (27-29)	288209
253035	2000	288504 (17-19)	24J186 (24-26)	24F065 (27-29)	288209
253061	1000	288504 (17-19)	24J186 (24-26)	24F065 (27-29)	288209
253062	1500	288504 (17-19)	24J186 (24-26)	24F065 (27-29)	288209
253063	2000	288504 (17-19)	24J186 (24-26)	24F065 (27-29)	288209
253085	1500	288504 (17-19)	24J186 (24-26)	24F065 (27-29)	288209
253086	2000	288504 (17-19)	24J186 (24-26)	24F065 (27-29)	288209
253396	2000	288504 (17-19)	24J186 (24-26)	24F065 (27-29)	288209
253397	1500	288504 (17-19)	24J186 (24-26)	24F065 (27-29)	288209
253398	1000	288504 (17-19)	24J186 (24-26)	24F065 (27-29)	288209
253423	1000	288504 (17-19)	24J186 (24-26)	24F065 (27-29)	288209
253520	1000	288504 (17-19)	24J186 (24-26)	24F065 (27-29)	288209
253521	1500	288504 (17-19)	24J186 (24-26)	24F065 (27-29)	288209
253522	2000	288504 (17-19)	24J186 (24-26)	24F065 (27-29)	288209
253523	1000	288504 (17-19)	24J186 (24-26)	24F065 (27-29)	288209
253524	1500	288504 (17-19)	24J186 (24-26)	24F065 (27-29)	288209
253525	2000	288504 (17-19)	24J186 (24-26)	24F065 (27-29)	288209
253568	1000	288504 (17-19)	24J186 (24-26)	24F065 (27-29)	288209
253569	1500	288504 (17-19)	24J186 (24-26)	24F065 (27-29)	288209
253570	2000	288504 (17-19)	24J186 (24-26)	24F065 (27-29)	288209
24E664†	1000	24J185 (24-26)	24J186 (24-26)	24F065 (27-29)	288209
24F062†	1000	24J185 (24-26)	24J186 (24-26)	24F065 (27-29)	288209
24H346†	1500	24J185 (24-26)	24J186 (24-26)	24F065 (27-29)	288209
24H347†	1500	24J185 (24-26)	24J186 (24-26)	24F065 (27-29)	288209
24H348†	2000	24J185 (24-26)	24J186 (24-26)	24F065 (27-29)	288209
24H349†	2000	24J185 (24-26)	24J186 (24-26)	24F065 (27-29)	288209

† *Retrofitted lowers.*

Connection Kit Usage Chart for Senator®, Bulldog®, NXT® 2200, and NXT® 3400 Air Motors, E-Flo® DC Electric Motors, and Viscount® II Hydraulic Motors

Refer to the following chart to select the correct Connection Kit for your pump lower and motor.

Pump Lower Part No.	Pump Lower Size (cc)	Connection Kit Part No. (see page numbers)					
		Senator	NXT 2200	Bulldog	NXT 3400	Viscount II	E-Flo DC
15D787	1500	not applicable	288202 (6-8)	not applicable	288202 (6-8)	not recommended	288202 (6-8)
239834	1000	not applicable	288202 (6-8)	not applicable	not recommended	not recommended	288202 (6-8)
239835	1500	not applicable	288202 (6-8)	not applicable	288202 (6-8)	not recommended	288202 (6-8)
239837	1000	not applicable	288202 (6-8)	not applicable	not recommended	not recommended	288202 (6-8)
239838	1500	not applicable	288202 (6-8)	not applicable	288202 (6-8)	not recommended	288202 (6-8)
24F424	1000	24F308 (20-23)	288209	not recommended	not recommended	not recommended	288209
24F425	1000	24F308 (20-23)	288209	not recommended	not recommended	not recommended	288209
24F426	1000	24F308 (20-23)	288209	not recommended	not recommended	not recommended	288209
24F427	1000	24F308 (20-23)	288209	not recommended	not recommended	not recommended	288209
24F431	1000	24F308 (20-23)	288209	not recommended	not recommended	not recommended	288209
24F432	1500	24F308 (20-23)	288209	24F308 (20-23)	not recommended	not recommended	288209
24F433	1500	24F308 (20-23)	288209	24F308 (20-23)	not recommended	not recommended	288209
24F434	1500	24F308 (20-23)	288209	24F308 (20-23)	not recommended	not recommended	288209
24F435	1500	24F308 (20-23)	288209	24F308 (20-23)	not recommended	not recommended	288209
24F439	1500	24F308 (20-23)	288209	24F308 (20-23)	not recommended	not recommended	288209
24F440	2000	24F308 (20-23)	288209	24F308 (20-23)	288209	24J390 (30-31)	288209
24F441	2000	24F308 (20-23)	288209	24F308 (20-23)	288209	24J390 (30-31)	288209
24F442	2000	24F308 (20-23)	288209	24F308 (20-23)	288209	24J390 (30-31)	288209
24F443	2000	24F308 (20-23)	288209	24F308 (20-23)	288209	24J390 (30-31)	288209
24F447	2000	24F308 (20-23)	288209	24F308 (20-23)	288209	24J390 (30-31)	288209
240606	1500	not applicable	288202 (6-8)	not applicable	288202 (6-8)	not recommended	288202 (6-8)
240607	1500	not applicable	288202 (6-8)	not applicable	288202 (6-8)	not recommended	288202 (6-8)
240608	1000	not applicable	288202 (6-8)	not applicable	not recommended	not recommended	288202 (6-8)
240609	1000	not applicable	288202 (6-8)	not applicable	not recommended	not recommended	288202 (6-8)

Pump Lower Part No.	Pump Lower Size (cc)	Connection Kit Part No. (see page numbers)					
		Senator	NXT 2200	Bulldog	NXT 3400	Viscount II	E-Flo DC
253033	1000	288208 (17-19)	288209	not recommended	not recommended	not recommended	288209
253034	1500	288208 (17-19)	288209	288208 (17-19)	288209	not recommended	288209
253035	2000	288208 (17-19)	288209	288208 (17-19)	288209	not recommended	288209
253061	1000	288208 (17-19)	288209	not recommended	not recommended	not recommended	288209
253062	1500	288208 (17-19)	288209	288208 (17-19)	288209	not recommended	288209
253063	2000	288208 (17-19)	288209	288208 (17-19)	288209	not recommended	288209
253085	1500	288208 (17-19)	288209	288208 (17-19)	288209	not recommended	288209
253086	2000	288208 (17-19)	288209	288208 (17-19)	288209	not recommended	288209
253396	2000	288208 (17-19)	288209	288208 (17-19)	288209	not recommended	288209
253397	1500	288208 (17-19)	288209	288208 (17-19)	288209	not recommended	288209
253398	1000	288208 (17-19)	288209	not recommended	not recommended	not recommended	288209
253423	1000	288208 (17-19)	288209	not recommended	not recommended	not recommended	288209
253520	1000	288208 (17-19)	288209	not recommended	not recommended	not recommended	288209
253521	1500	288208 (17-19)	288209	288208 (17-19)	288209	not recommended	288209
253522	2000	288208 (17-19)	288209	288208 (17-19)	288209	not recommended	288209
253523	1000	288208 (17-19)	288209	not recommended	not recommended	not recommended	288209
253524	1500	288208 (17-19)	288209	288208 (17-19)	288209	not recommended	288209
253525	2000	288208 (17-19)	288209	288208 (17-19)	288209	not recommended	288209
253568	1000	288208 (17-19)	288209	not recommended	not recommended	not recommended	288209
253569	1500	288208 (17-19)	288209	288208 (17-19)	288209	not recommended	288209
24E664†	1000	24F308 (20-23)	288209	not recommended	not recommended	not recommended	288209
24F062†	1000	24F308 (20-23)	288209	not recommended	not recommended	not recommended	288209
24H346†	1500	24F308 (20-23)	288209	24F308 (20-23)	288209	not recommended	288209
24H347†	1500	24F308 (20-23)	288209	24F308 (20-23)	288209	not recommended	288209
24H348†	2000	24F308 (20-23)	288209	24F308 (20-23)	288209	24J390 (30-31)	288209
24H349†	2000	24F308 (20-23)	288209	24F308 (20-23)	288209	24J390 (30-31)	288209

† *Retrofitted lowers.*

Connection Kit 288202

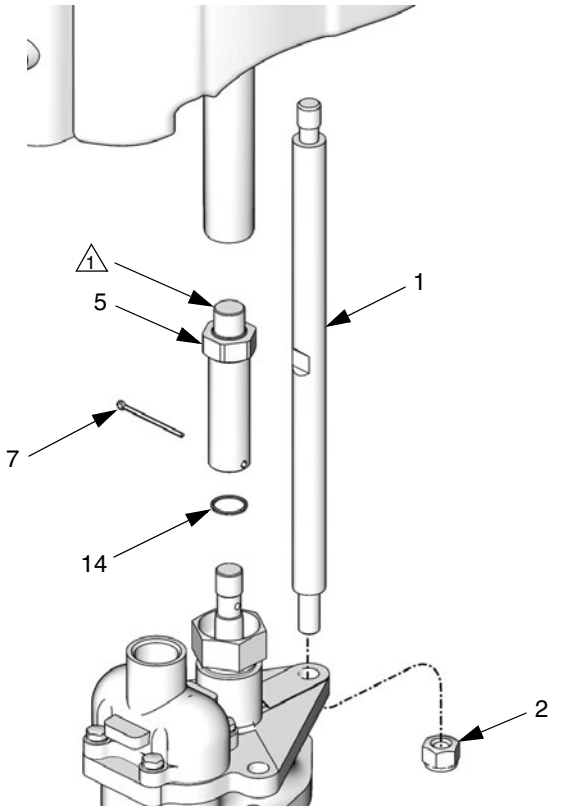
Connects Old Style 4-Ball Lower to NXT 2200 or NXT 3400 Air Motor, or E-Flo DC Electric Motor

NOTE: See the **Connection Kit Usage Chart** on page 4 to find the lowers and motors which use Connection Kit 288202.

Using an NXT 2200 motor or an E-Flo DC 2 HP motor with a 750cc lower or using an NXT 3400 motor with a 750cc or 1000cc lower could cause dangerous overpressurization.

Parts List and Drawing

Ref.	Part.	Description	Qty
1	15G924	ROD, tie	3
2	108683	NUT, lock, hex	3
3	111368	SEALANT; 0.5 cc	1
5	15H980	ADAPTER, lg mr	1
7	100103	PIN, cotter	1
14	108284	PACKING, o-ring	1



TI8984a

1 Apply sealant (3) and torque to 145-155 ft-lb (196 -210 N•m)

Pump Performance Charts

NOTE: See pages 10-12 for E-Flo DC Performance Charts.

Fluid Outlet Pressure

To find fluid outlet pressure (MPa/bar/psi) at a specific flow (lpm/gpm) and operating pressure (A/B/C):

1. Locate desired flow at bottom of chart.
2. Follow vertical line up to intersection with selected operating pressure curve (solid line). Follow left to scale to read fluid outlet pressure.

Air Consumption

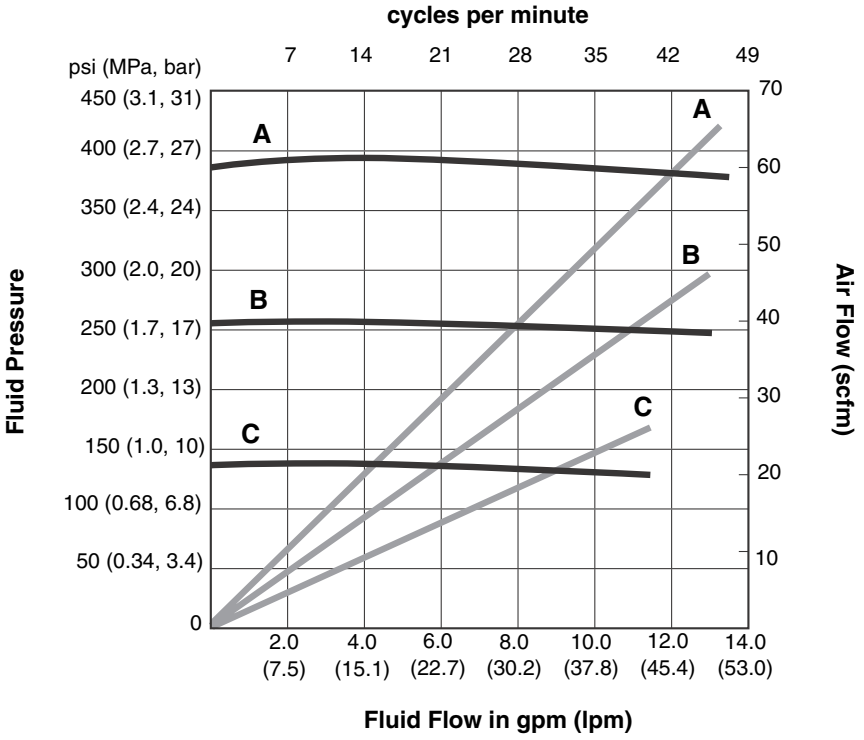
To find air consumption (l/min. or gpm) at a specific fluid flow (l/min. or gpm) and operating pressure (A/B/C):

1. Locate desired flow along bottom of chart.
2. Read vertical line up to intersection with selected air consumption curve (gray line). Follow right to scale to read air consumption.

Key

A 0.7 MPa, 7 bar (100 psi) air pressure
B 0.5 MPa, 4.9 bar (70 psi) air pressure
C 0.3 MPa, 2.8 bar (40 psi) air pressure
Test Fluid: No. 10 Weight Oil

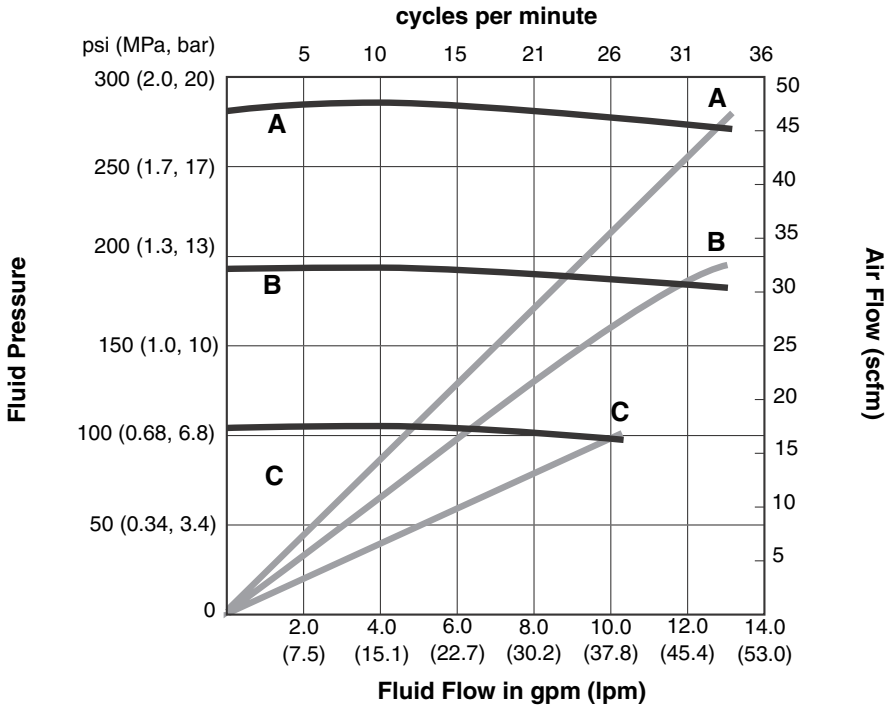
NXT 2200 with 1000cc Lower



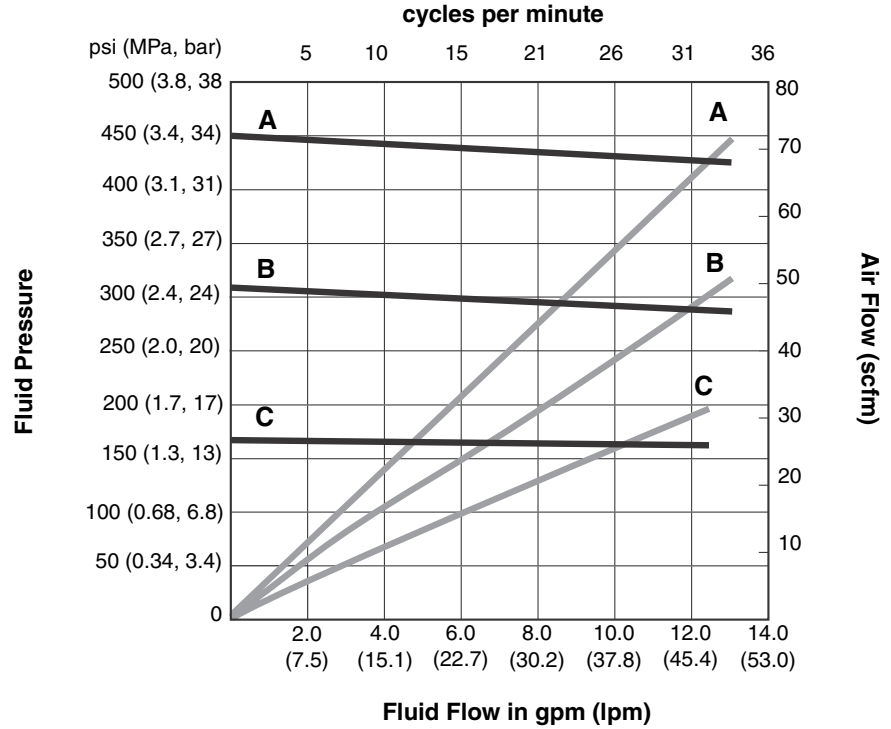
Key

A 0.7 MPa, 7 bar (100 psi) air pressure
B 0.5 MPa, 4.9 bar (70 psi) air pressure
C 0.3 MPa, 2.8 bar (40 psi) air pressure
Test Fluid: No. 10 Weight Oil

NXT 2200 with 1500cc Lower



NXT 3400 with 1500cc Lower



Connection Kit 288209

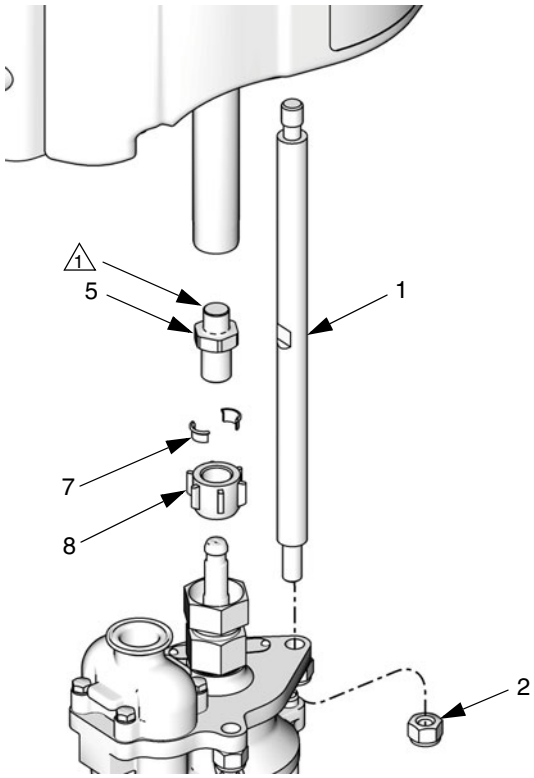
Connects 4-Ball Lower with Torqueable or Spring Loaded Throat Packings to NXT 2200 or NXT 3400 Air Motor, or E-Flo DC Electric Motor

NOTE: See the **Connection Kit Usage Charts** on pages 2-5 to find the lowers and motors which use Connection Kit 288209.

Using an NXT 2200 motor or an E-Flo DC 2 HP motor with a 750cc lower or using an NXT 3400 motor with a 750cc or 1000cc lower could cause dangerous overpressurization.

Parts List and Drawing

Ref.	Part.	Description	Qty
1	15G924	ROD, tie	3
2	108683	NUT, lock, hex	3
3	111368	SEALANT; 0.5 cc	1
5	15H369	ADAPTER	1
7	184128	COLLAR, coupling	2
8	184059	NUT, coupling	1



TI21556a

1 Apply sealant (3) and torque to 145-155 ft-lb (196 -210 N•m)

Pump Performance Charts

NOTE: See pages 7-8 for NXT 2200 and NXT 3400 Performance Charts.

Fluid Outlet Pressure

To find fluid outlet pressure (psi/MPa/bar) at a specific flow (gpm/lpm) and percentage of maximum force (A/B/C):

1. Locate desired flow at bottom of chart.
2. Follow vertical line up to intersection with selected percentage of maximum force (see the **Key** below).
3. Follow left to vertical scale to read fluid outlet pressure.

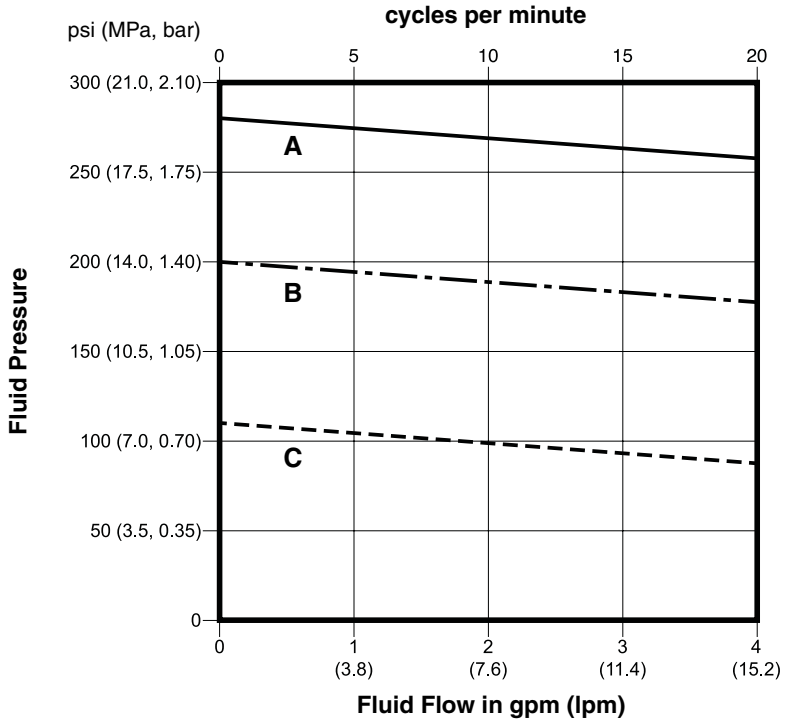
Key to E-Flo DC Performance Charts

NOTE: The charts show the motor operating at 100%, 70%, and 40% of maximum force. These values are approximately equivalent to an air motor operating at 100, 70, and 40 psi..

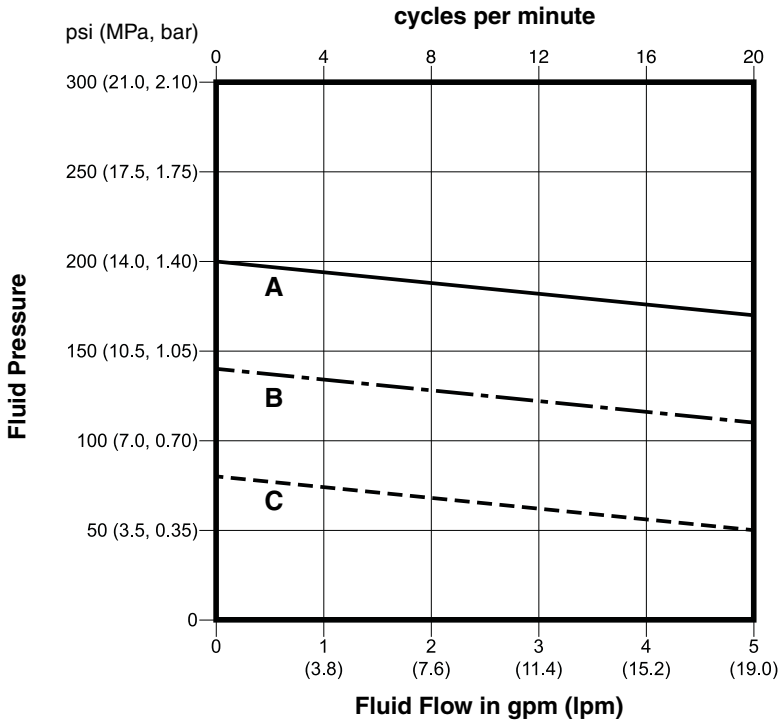
A	———	100% of maximum force
B	— · — · — · —	70% of maximum force
C	— — — — — —	40% of maximum force

Test Fluid: No. 10 Weight Oil

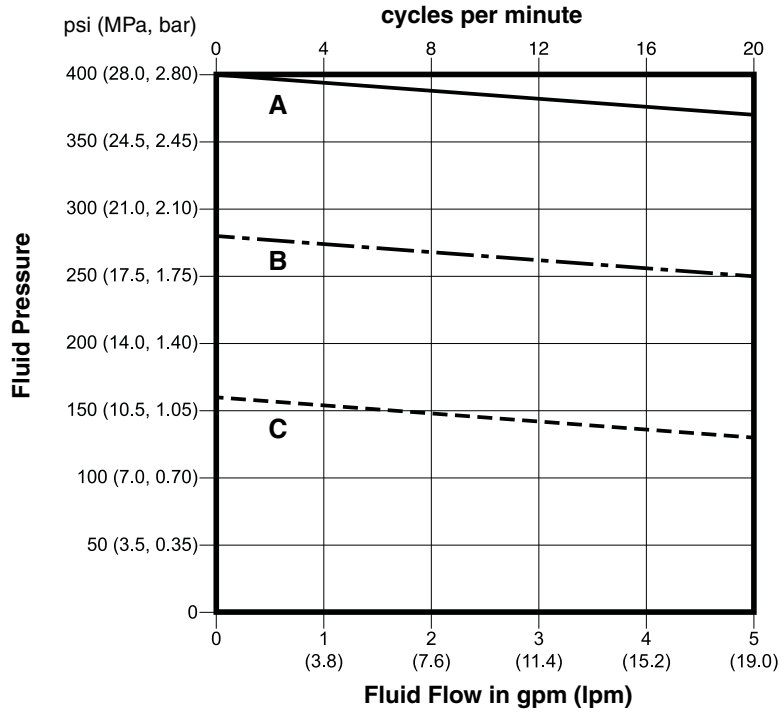
1 HP Motor (1400 lb maximum force) with 750cc Lower



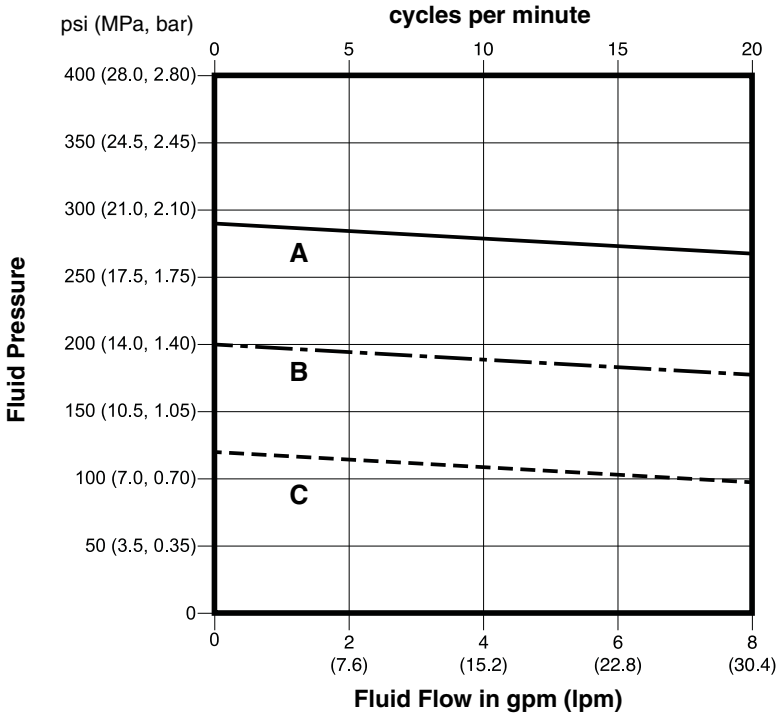
1 HP Motor (1400 lb maximum force) with 1000cc Lower



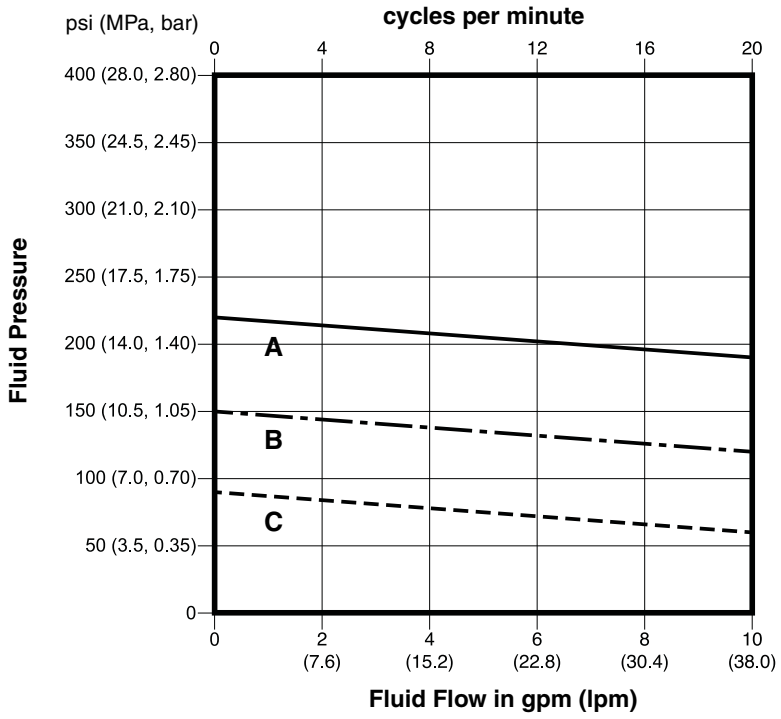
2 HP Motor (2800 lb maximum force) with 1000cc Lower



2 HP Motor (2800 lb maximum force) with 1500cc Lower



2 HP Motor (2800 lb maximum force) with 2000cc Lower



Connection Kit 288208

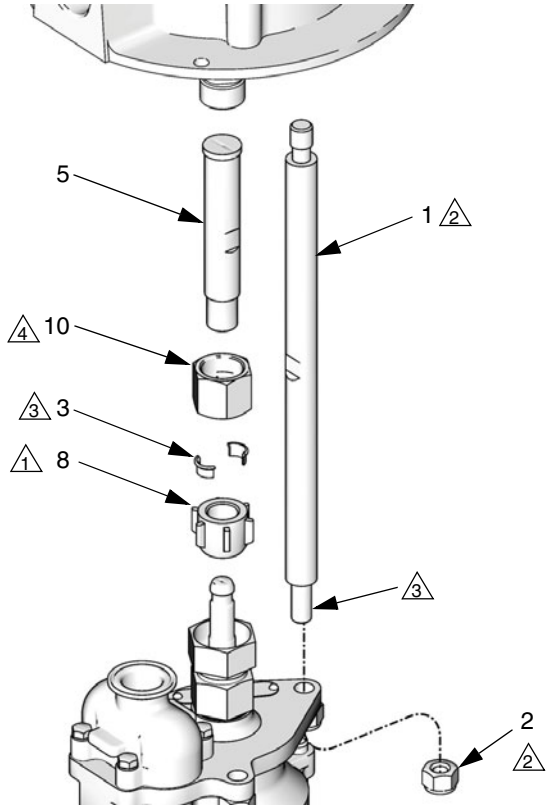
Connects 4-Ball Lower with Torqueable Throat Packings to Bulldog or Senator Air Motor

NOTE: See the **Connection Kit Usage Chart** on page 5 to find the lowers and motors which use Connection Kit 288208.

Using a Bulldog air motor with a 1000cc lower could cause dangerous overpressurization.

Parts List and Drawing

Ref.	Part.	Description	Qty
1	183089	ROD, tie	3
2	108527	NUT, lock, hex	3
3	184128	COLLAR, coupling	2
5	15H981	ADAPTER, lg mr	1
8	184059	NUT, coupling	1
10	183079	NUT, coupling	1



TI8985a

1 Torque to 145-150 ft-lb (196-203 N•m).

2 Torque to 50-60 ft-lb (68-91 N•m).

3 Apply lubricant.

4 Torque to 75-80 ft-lb (102-109 N•m).

Pump Performance Charts

Fluid Outlet Pressure

To find fluid outlet pressure (MPa/bar/psi) at a specific flow (lpm/gpm) and operating pressure (A/B/C):

1. Locate desired flow at bottom of chart.
2. Follow vertical line up to intersection with selected operating pressure curve (solid line). Follow left to scale to read fluid outlet pressure.

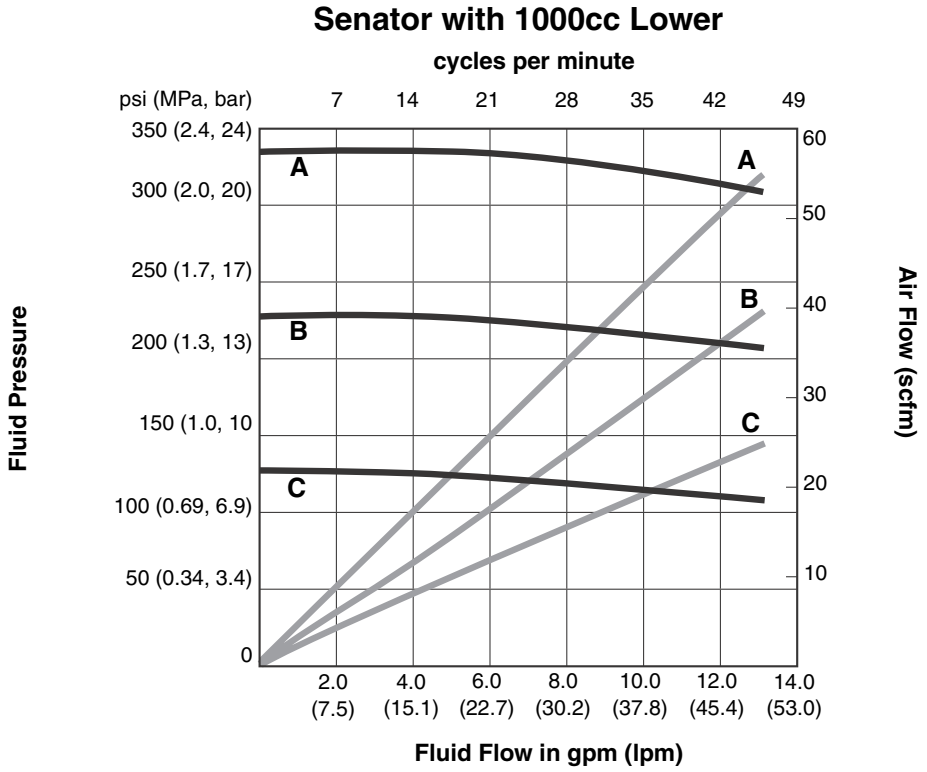
Air Consumption

To find air consumption (l/min. or gpm) at a specific fluid flow (l/min. or gpm) and operating pressure (A/B/C):

1. Locate desired flow along bottom of chart.
2. Read vertical line up to intersection with selected air consumption curve (gray line). Follow right to scale to read air consumption.

Key

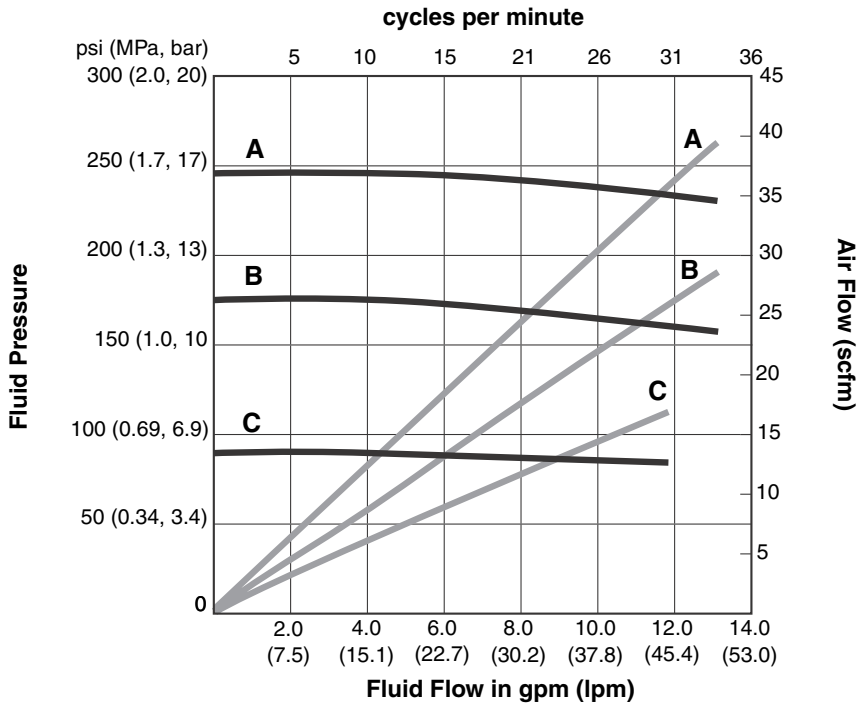
A 0.7 MPa, 7 bar (100 psi) air pressure
B 0.5 MPa, 4.9 bar (70 psi) air pressure
C 0.3 MPa, 2.8 bar (40 psi) air pressure
Test Fluid: No. 10 Weight Oil



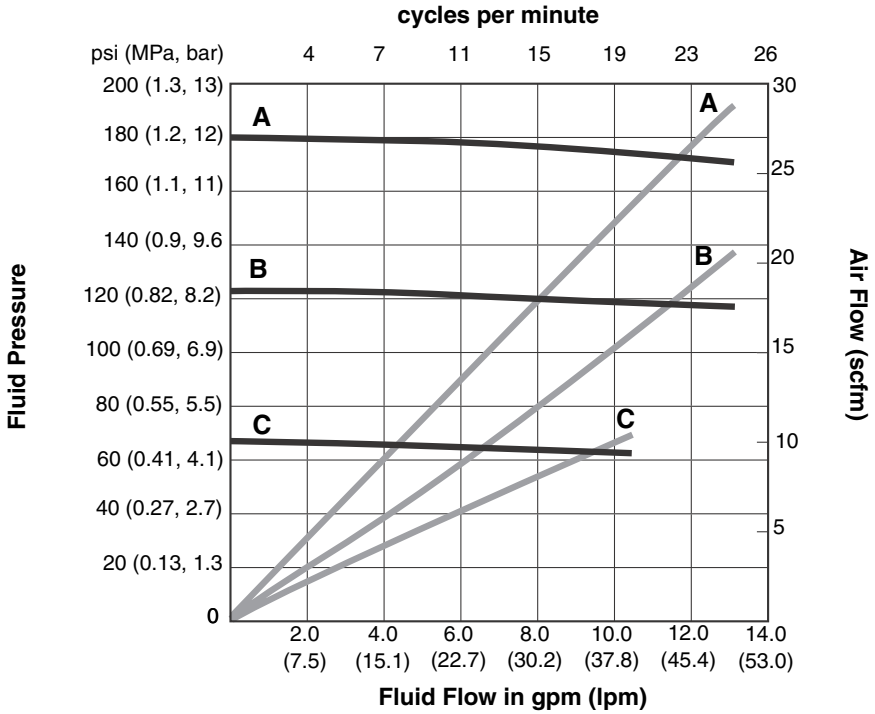
Key

A 0.7 MPa, 7 bar (100 psi) air pressure
B 0.5 MPa, 4.9 bar (70 psi) air pressure
C 0.3 MPa, 2.8 bar (40 psi) air pressure
Test Fluid: No. 10 Weight Oil

Senator with 1500cc Lower



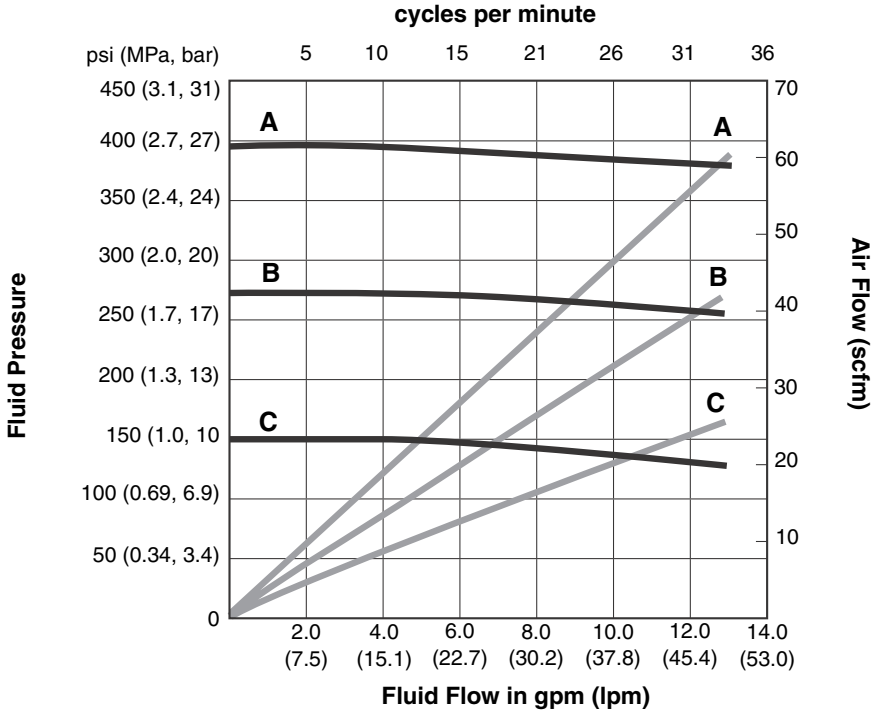
Senator with 2000cc Lower



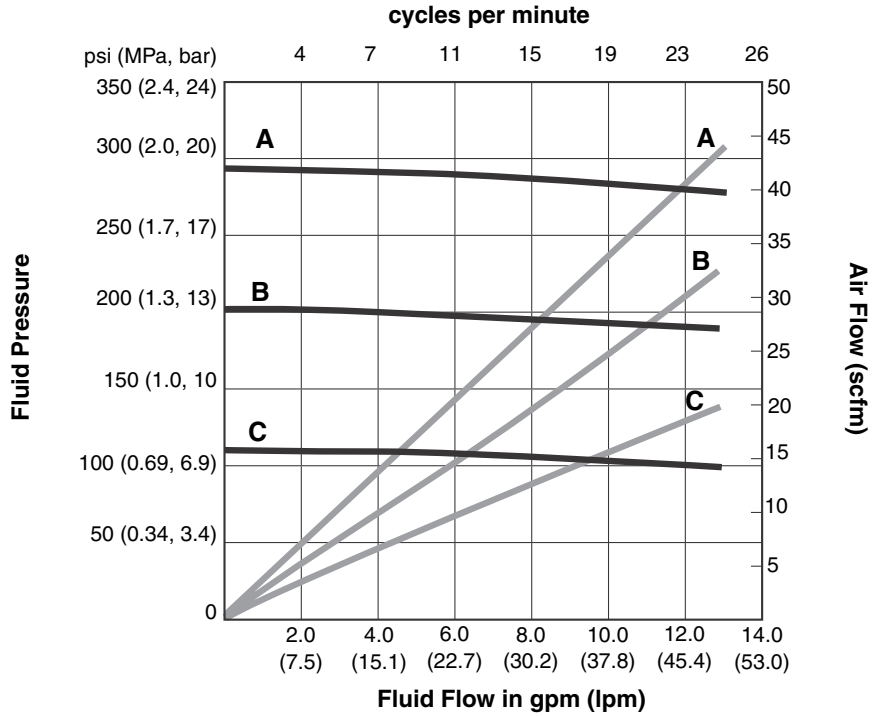
Key

A 0.7 MPa, 7 bar (100 psi) air pressure
B 0.5 MPa, 4.9 bar (70 psi) air pressure
C 0.3 MPa, 2.8 bar (40 psi) air pressure
Test Fluid: No. 10 Weight Oil

Bulldog with 1500cc Lower



Bulldog with 2000cc Lower



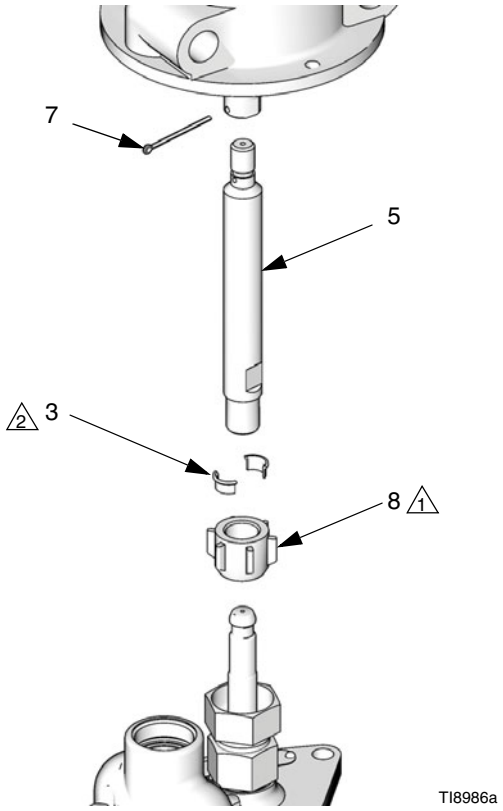
Connection Kit 288504

Connects 4-Ball Lower with Torqueable Throat Packings to President Air Motor

NOTE: See the **Connection Kit Usage Chart** on page 3 to find the lowers and motors which use Connection Kit 288504.

Parts List and Drawing

Ref.	Part.	Description	Qty
3	184128	COLLAR, coupling	2
5	15J948	ADAPTER	1
7	100579	PIN, cotter	1
8	184059	NUT, coupling	1



1 Torque to 145-150 ft-lb (197-203 N•m).

2 Apply lubricant.

Pump Performance Charts

Fluid Outlet Pressure

To find fluid outlet pressure (MPa/bar/psi) at a specific flow (lpm/gpm) and operating pressure (A/B/C/D):

1. Locate desired flow at bottom of chart.
2. Follow vertical line up to intersection with selected operating pressure curve (solid line). Follow left to scale to read fluid outlet pressure.

Air Consumption

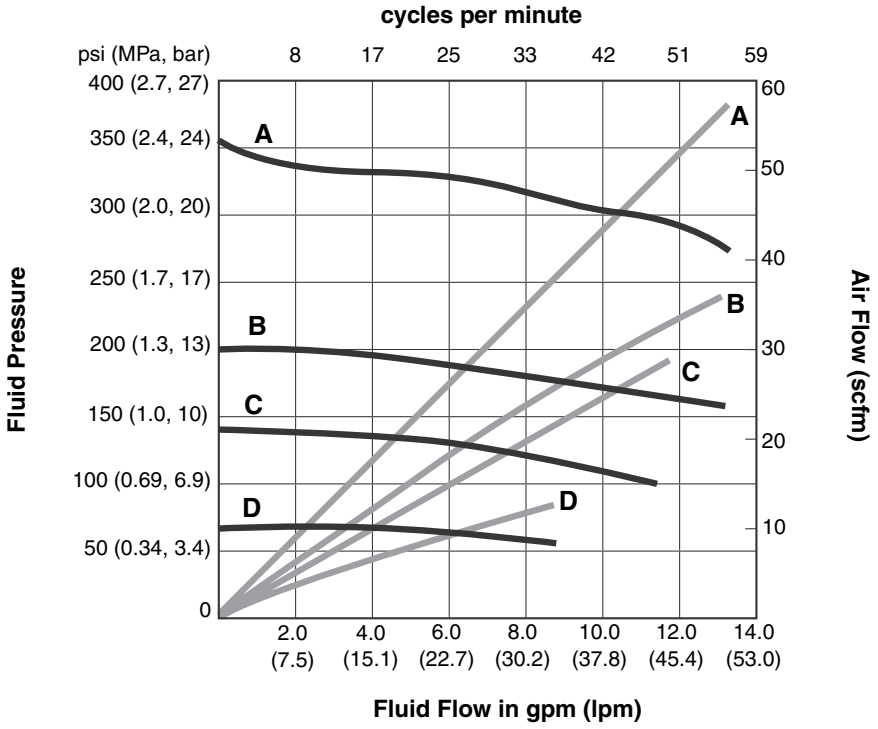
To find air consumption (l/min. or gpm) at a specific fluid flow (l/min. or gpm) and operating pressure (A/B/C/D):

1. Locate desired flow along bottom of chart.
2. Read vertical line up to intersection with selected air consumption curve (gray line). Follow right to scale to read air consumption.

Key

A 1.17 MPa, 11.7 bar (170 psi) air pressure
B 0.7 MPa, 7 bar (100 psi) air pressure
C 0.5 MPa, 4.9 bar (70 psi) air pressure
D 0.3 MPa, 2.8 bar (40 psi) air pressure
Test Fluid: No. 10 Weight Oil

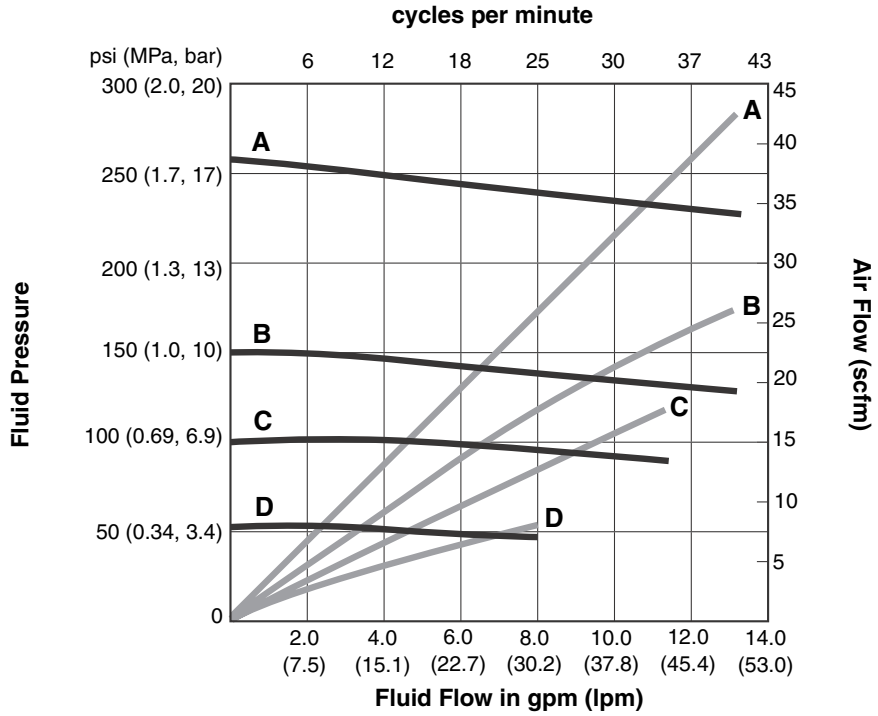
President with 1000cc Lower



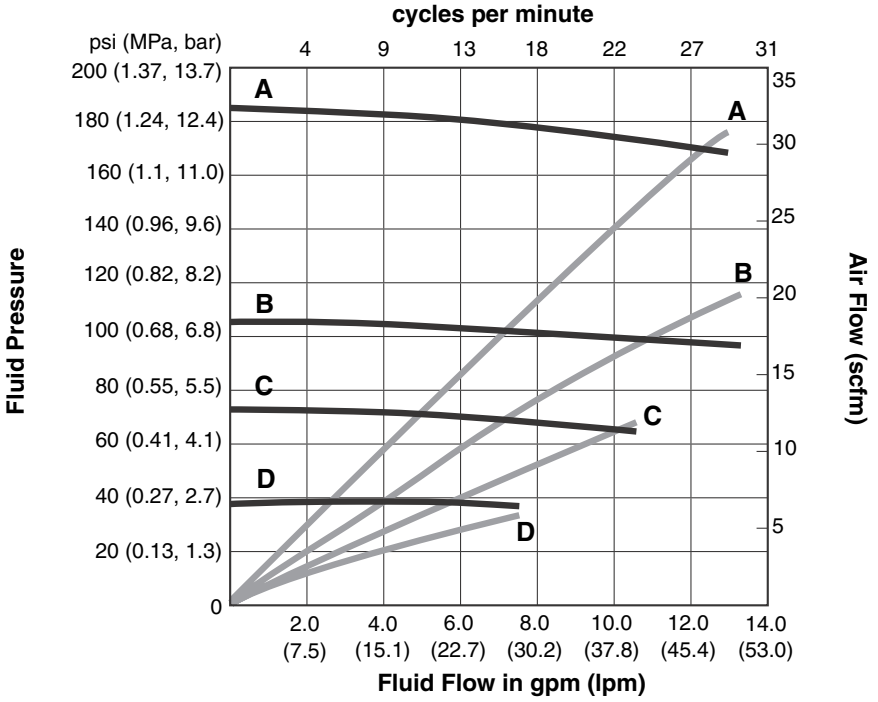
Key

A 1.17 MPa, 11.7 bar (170 psi) air pressure
B 0.7 MPa, 7 bar (100 psi) air pressure
C 0.5 MPa, 4.9 bar (70 psi) air pressure
D 0.3 MPa, 2.8 bar (40 psi) air pressure
Test Fluid: No. 10 Weight Oil

President with 1500cc Lower



President with 2000cc Lower



Connection Kit 24F308

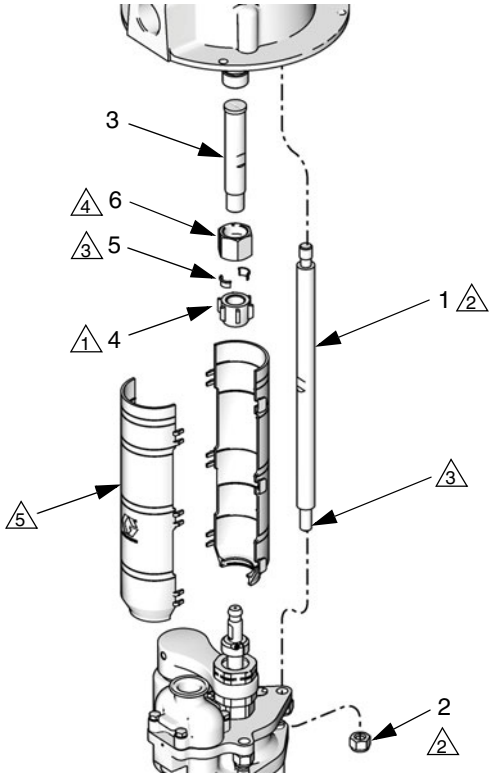
Connects 4-Ball Lower with Spring Loaded Throat Packings to Bulldog or Senator Air Motor

NOTE: See the **Connection Kit Usage Chart** on pages 4-5 to find the lowers and motors which use Connection Kit 24F308.

Using a Bulldog air motor with a 1000cc lower could cause dangerous overpressurization.

Parts List and Drawing

Ref.	Part.	Description	Qty
1	183089	ROD, tie	3
2	108527	NUT, lock, hex	3
3	16F214	ADAPTER, lg mr	1
4	184059	NUT, coupling	1
5	184128	COLLAR, coupling	2
6	183079	NUT, coupling	1



TI8985b

1 Torque to 145-150 ft-lb (196-203 N•m).

2 Torque to 50-60 ft-lb (68-91 N•m).

3 Apply lubricant.

4 Torque to 75-80 ft-lb (102-109 N•m).

5 Shield Kit is not included. See manual 406876 to order the correct shield kit for your pump.

Pump Performance Charts

Fluid Outlet Pressure

To find fluid outlet pressure (MPa/bar/psi) at a specific flow (lpm/gpm) and operating pressure (A/B/C):

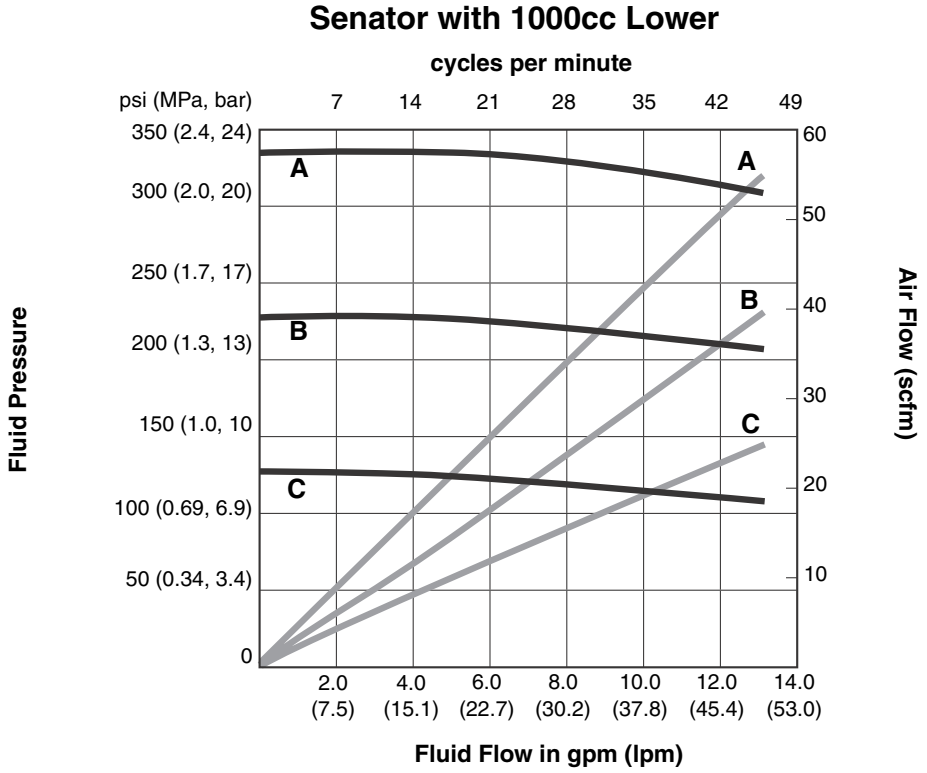
1. Locate desired flow at bottom of chart.
2. Follow vertical line up to intersection with selected operating pressure curve (solid line). Follow left to scale to read fluid outlet pressure.

Air Consumption

To find air consumption (l/min. or gpm) at a specific fluid flow (l/min. or gpm) and operating pressure (A/B/C):

1. Locate desired flow along bottom of chart.
2. Read vertical line up to intersection with selected air consumption curve (gray line). Follow right to scale to read air consumption.

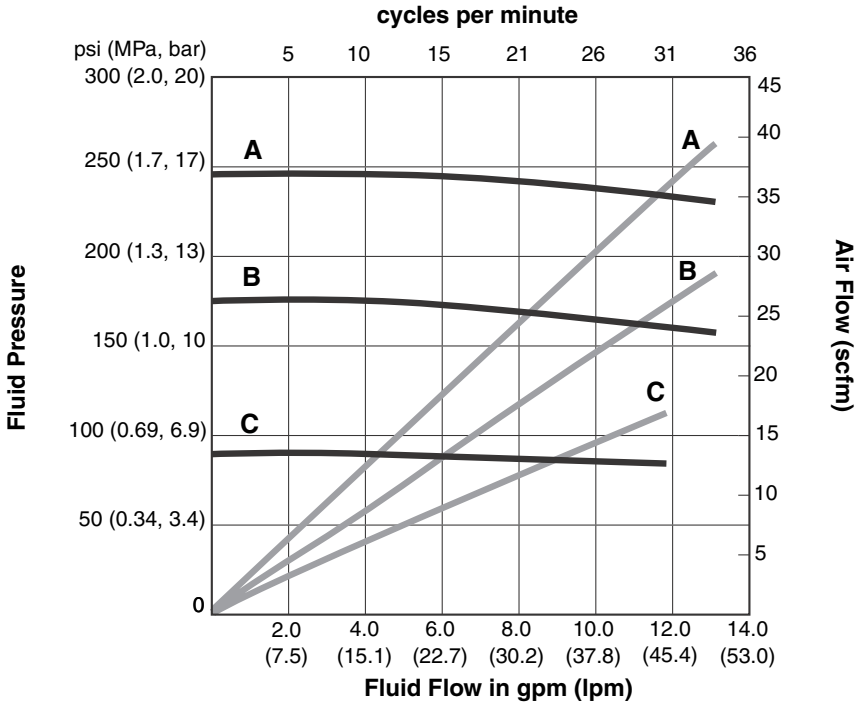
Key
A 0.7 MPa, 7 bar (100 psi) air pressure
B 0.5 MPa, 4.9 bar (70 psi) air pressure
C 0.3 MPa, 2.8 bar (40 psi) air pressure
Test Fluid: No. 10 Weight Oil



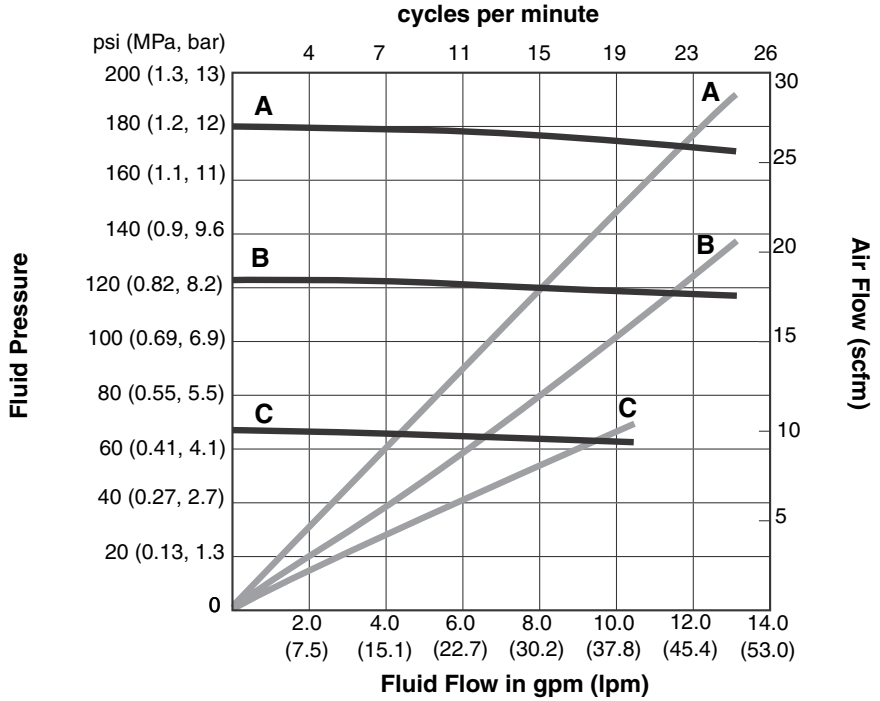
Key

A 0.7 MPa, 7 bar (100 psi) air pressure
B 0.5 MPa, 4.9 bar (70 psi) air pressure
C 0.3 MPa, 2.8 bar (40 psi) air pressure
Test Fluid: No. 10 Weight Oil

Senator with 1500cc Lower



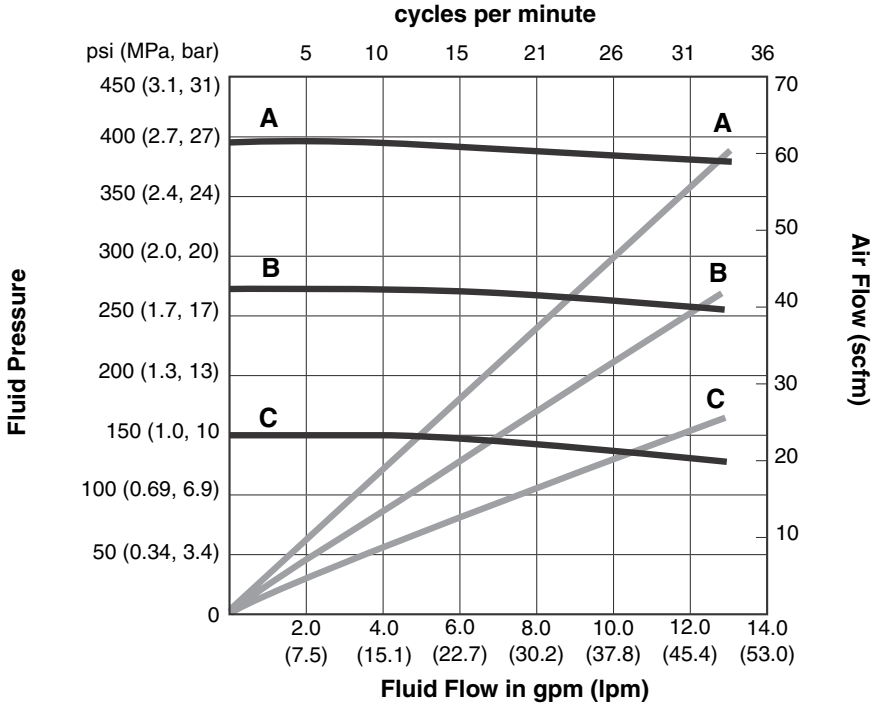
Senator with 2000cc Lower



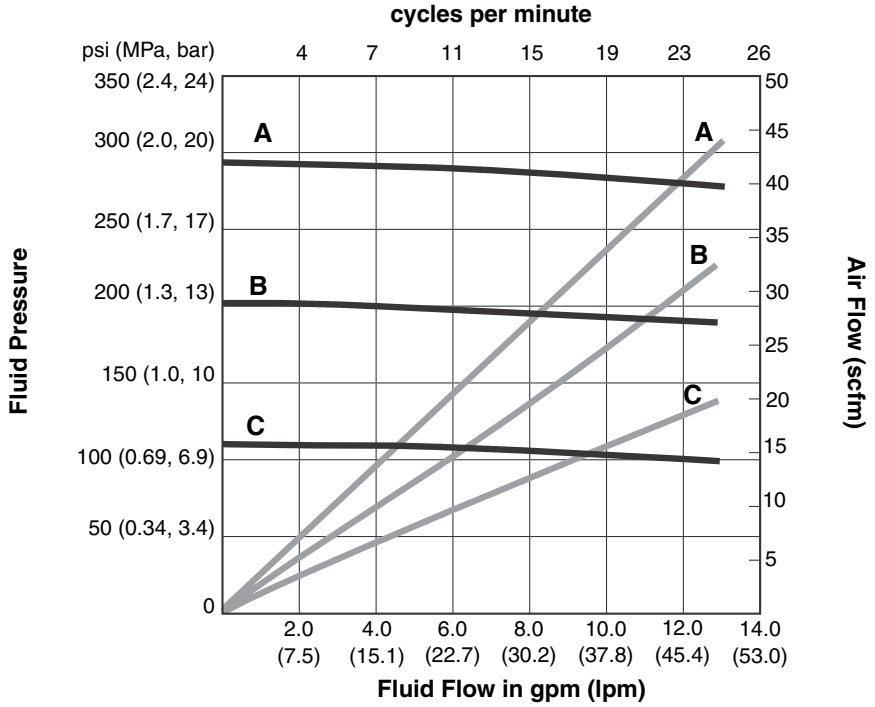
Key

A 0.7 MPa, 7 bar (100 psi) air pressure
B 0.5 MPa, 4.9 bar (70 psi) air pressure
C 0.3 MPa, 2.8 bar (40 psi) air pressure
Test Fluid: No. 10 Weight Oil

Bulldog with 1500cc Lower



Bulldog with 2000cc Lower



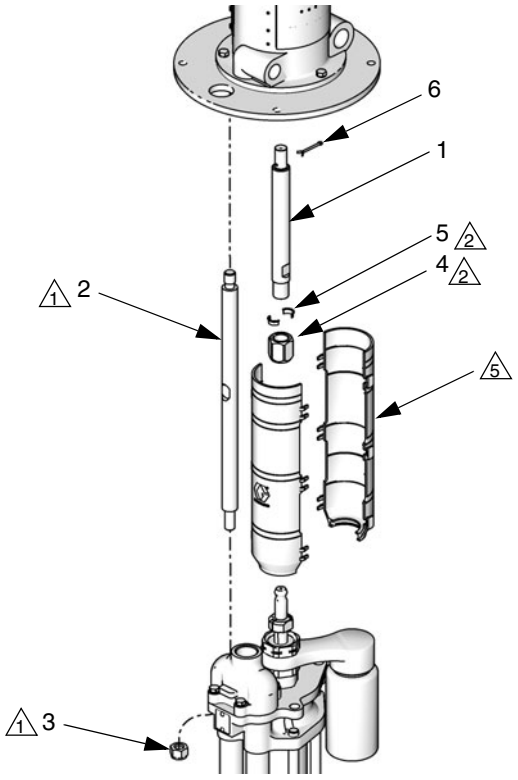
Connection Kits 24J185 (shown) and 24J186

Connects 4-Ball Lower with Spring Loaded Throat Packings to President Air Motor

NOTE: See the **Connection Kit Usage Chart** on pages 2-3 to find the lowers and motors which use Connection Kits 24J185 and 24J186.

Parts List and Drawing

Ref.	Part.	Description	Qty
1	16H544	ADAPTER; Kit 24J185 only	1
	16H375	ADAPTER; Kit 24J186 only	1
2	15G924	TIE ROD; Kit 24J185 only	3
	16H434	TIE ROD; Kit 24J186 only	3
3	108683	NUT, lock, hex	3
4	15T311	NUT, coupling	1
5	184128	COLLAR, coupling	2
6	100103	PIN, cotter	1



TI6809a

1 Torque to 145-150 ft-lb (197-203 N•m).

2 Apply lubricant.

5 Shield Kit is not included. See manual 406876 to order the correct shield kit for your pump.

Pump Performance Charts

Fluid Outlet Pressure

To find fluid outlet pressure (MPa/bar/psi) at a specific flow (lpm/gpm) and operating pressure (A/B/C):

1. Locate desired flow at bottom of chart.
2. Follow vertical line up to intersection with selected operating pressure curve (solid line). Follow left to scale to read fluid outlet pressure.

Air Consumption

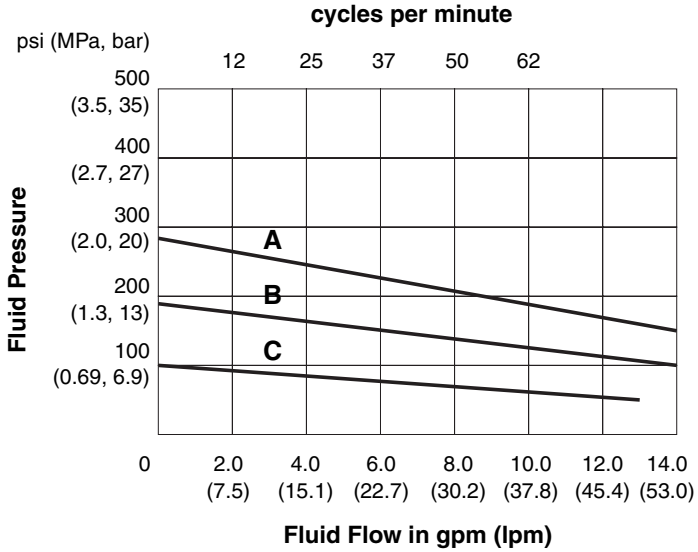
To find air consumption (l/min. or gpm) at a specific fluid flow (l/min. or gpm) and operating pressure (A/B/C):

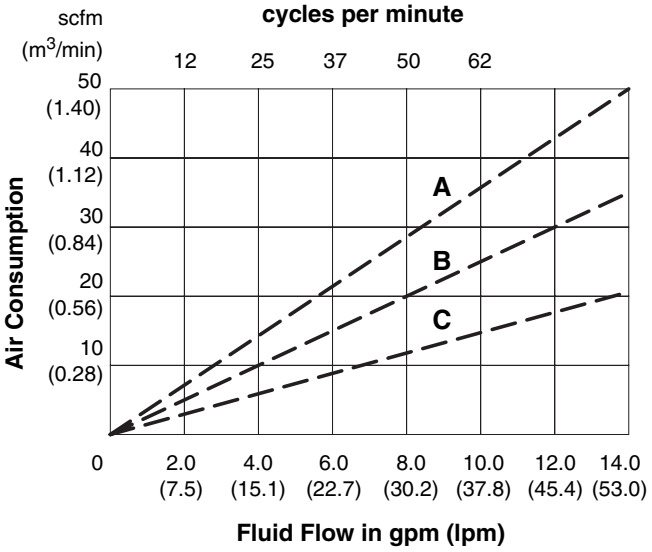
1. Locate desired flow along bottom of chart.
2. Read vertical line up to intersection with selected air consumption curve (dashed line). Follow left to scale to read air consumption.

Key

A 0.7 MPa, 7 bar (100 psi) air pressure
B 0.5 MPa, 4.9 bar (70 psi) air pressure
C 0.3 MPa, 2.8 bar (40 psi) air pressure
Test Fluid: No. 10 Weight Oil

President with 750cc Lower

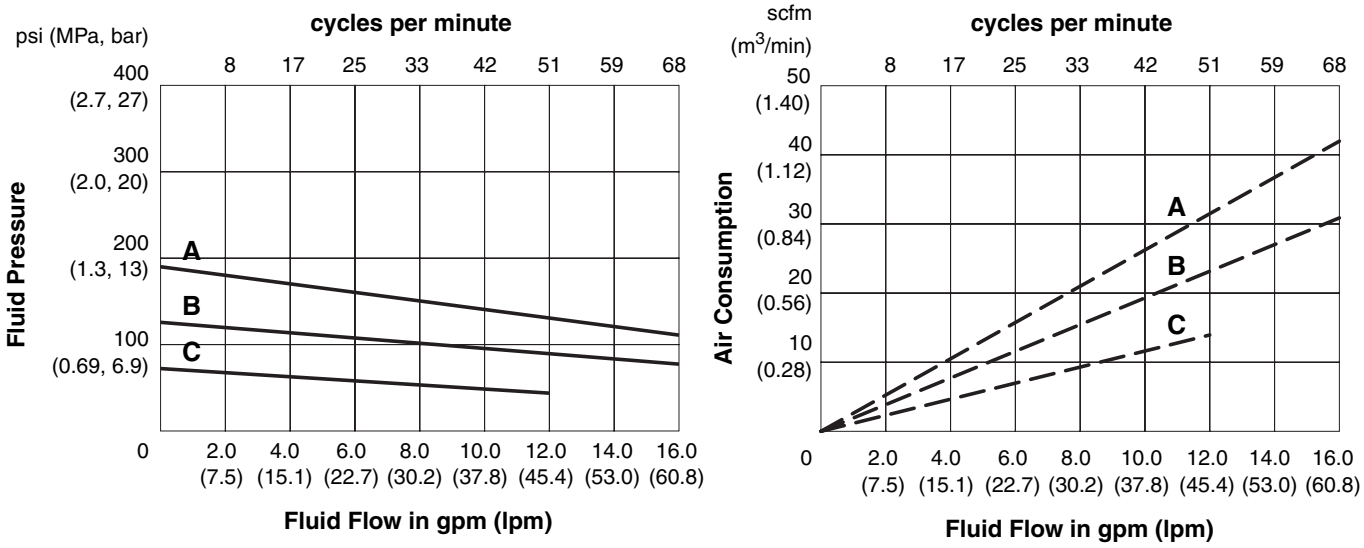




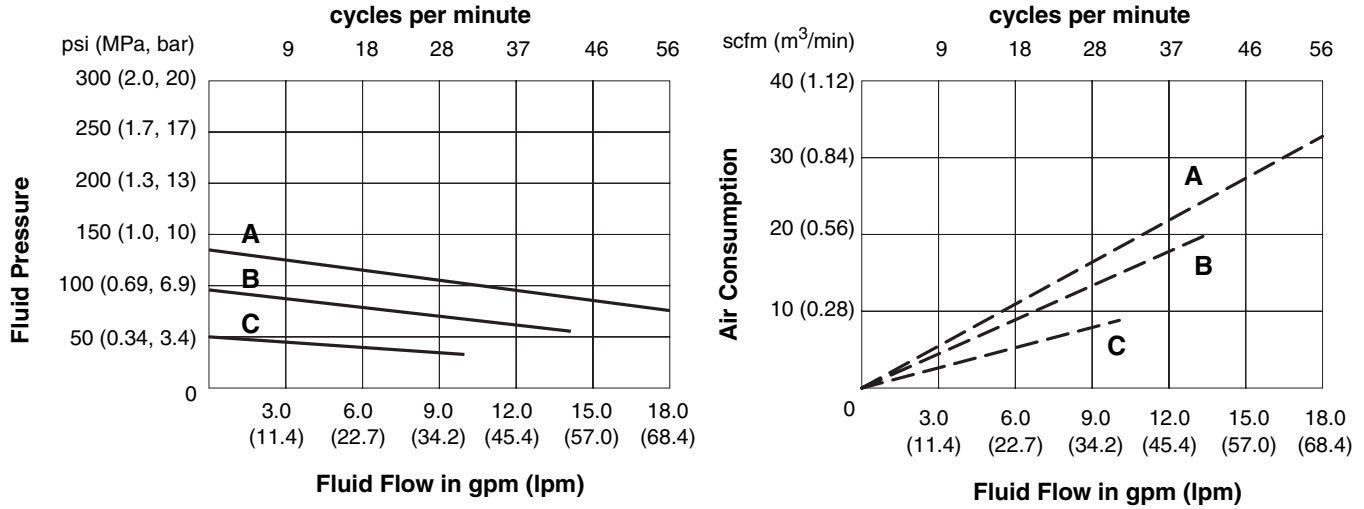
Key

A 0.7 MPa, 7 bar (100 psi) air pressure
B 0.5 MPa, 4.9 bar (70 psi) air pressure
C 0.3 MPa, 2.8 bar (40 psi) air pressure
Test Fluid: No. 10 Weight Oil

President with 1000cc Lower



President with 1500cc Lower



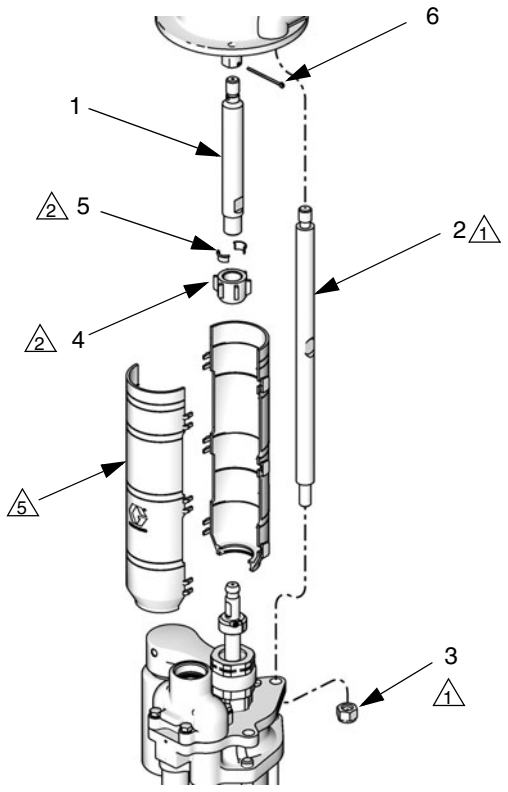
Connection Kit 24F065

Connects 4-Ball Lower with Spring Loaded Throat Packings to Viscount I+ Hydraulic Motor

NOTE: See the **Connection Kit Usage Chart** on pages 2-3 to find the lowers and motors which use Connection Kit 24F065.

Parts List and Drawing

Ref.	Part.	Description	Qty
1	16C373	ADAPTER	1
2	15G924	TIE ROD	3
3	108683	NUT, lock, hex	3
4	184059	NUT, coupling	1
5	184128	COLLAR, coupling	2
6	100579	PIN, cotter	1



TI8986b

1 Torque to 145-150 ft-lb (197-203 N•m).

2 Apply lubricant.

5 Shield Kit is not included. See manual 406876 to order the correct shield kit for your pump.

Pump Performance Charts

Fluid Outlet Pressure

To find fluid outlet pressure (psi/MPa/bar) at a specific fluid flow (lpm/gpm) and operating hydraulic pressure (psi/MPa/bar):

1. Locate desired flow along bottom of chart.
2. Follow vertical line up to intersection with selected fluid outlet pressure curve (black). Follow left to scale to read fluid outlet pressure.

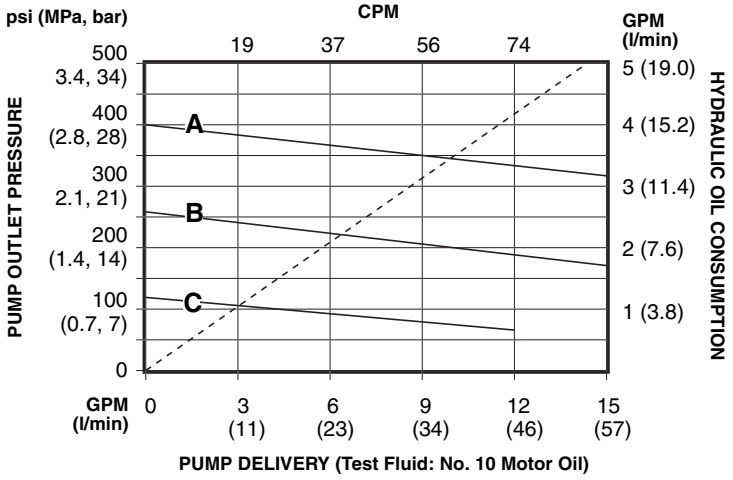
Key:
A 10.3 MPa, 103 bar (1500 psi) hydraulic pressure
B 7.2 MPa, 72.4 bar (1050 psi) hydraulic pressure
C 4.1 MPa, 41 bar (600 psi) hydraulic pressure

Hydraulic Oil Consumption

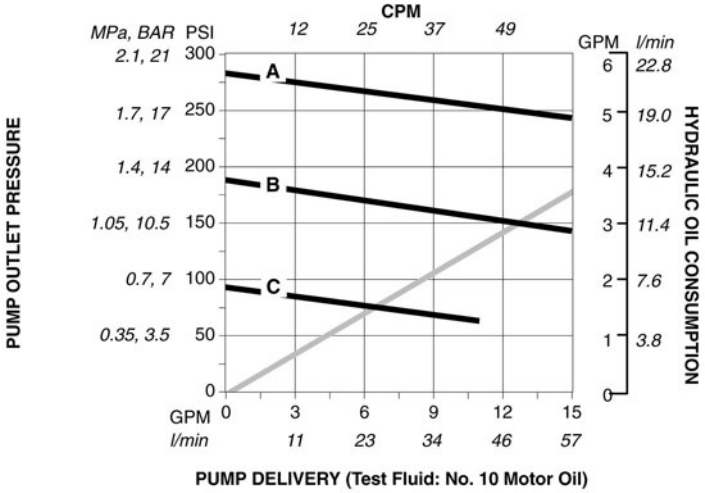
To find motor hydraulic oil consumption (l/min. or gpm) at a specific fluid flow (l/min. or gpm):

1. Locate desired flow along bottom of chart.
2. Read vertical line up to intersection with hydraulic oil consumption curve (dashes or gray line). Follow right to scale to read hydraulic oil consumption.

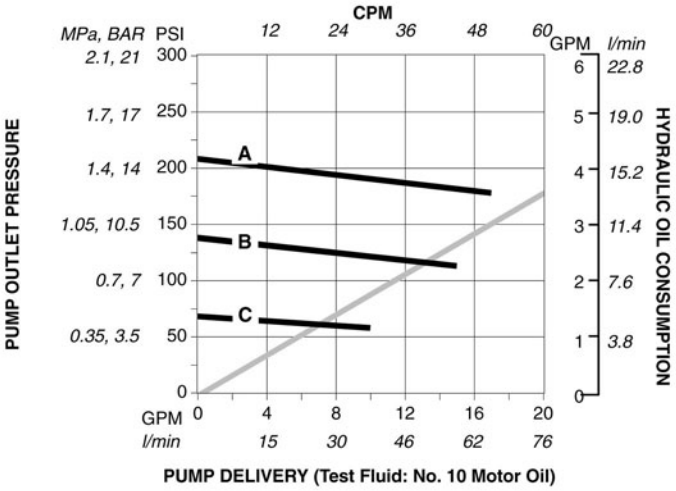
Viscount I+ Motor, 750cc Lower



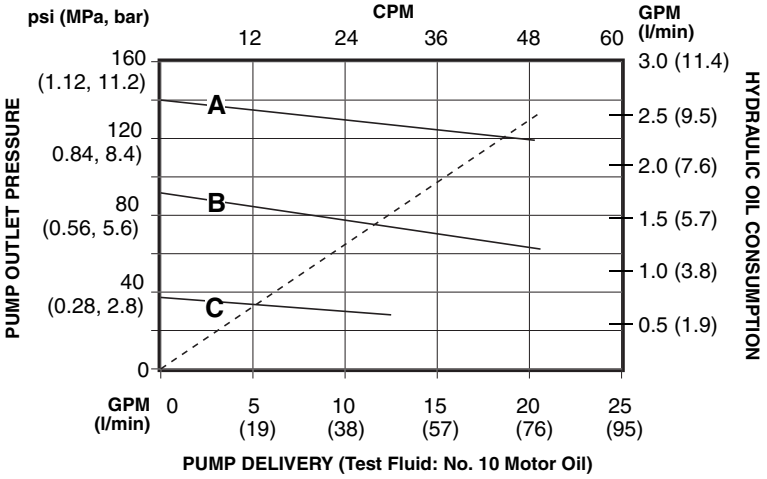
Viscount I+ Motor, 1000cc Lower



Viscount I+ Motor, 1500cc Lower



Viscount I+ Motor, 2000cc Lower



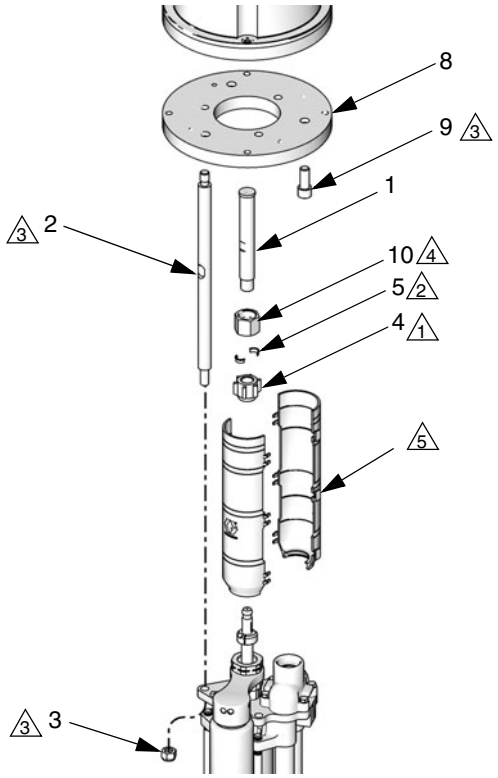
Connection Kit 24J390

Connects 4-Ball Lower with Spring Loaded Throat Packings to Viscount II Hydraulic Motor

NOTE: See the **Connection Kit Usage Chart** on pages 4-5 to find the lowers and motors which use Connection Kit 24J390.

Parts List and Drawing

Ref.	Part.	Description	Qty
1	15K736	ADAPTER	1
2	15G924	TIE ROD	3
3	108683	NUT, lock, hex	3
4	184059	NUT, coupling	1
5	184128	COLLAR, coupling	2
8	120558	PLATE, mounting	1
9	C19789	SCREW, cap, socket hd	3
10	183079	NUT, coupling	1



TI16940b

1 Torque to 90-100 ft-lb (122-135 N•m).

2 Apply lubricant.

3 Torque to 50-55 ft-lb (68-75 N•m).

4 Torque to 75-80 ft-lb (102-109 N•m).

5 Shield Kit is not included. See manual 406876 to order the correct shield kit for your pump.

Pump Performance Charts

Fluid Outlet Pressure

To find fluid outlet pressure (psi/MPa/bar) at a specific fluid flow (lpm/gpm) and operating hydraulic pressure (psi/MPa/bar):

1. Locate desired flow along bottom of chart.
2. Follow vertical line up to intersection with selected fluid outlet pressure curve (black). Follow left to scale to read fluid outlet pressure.

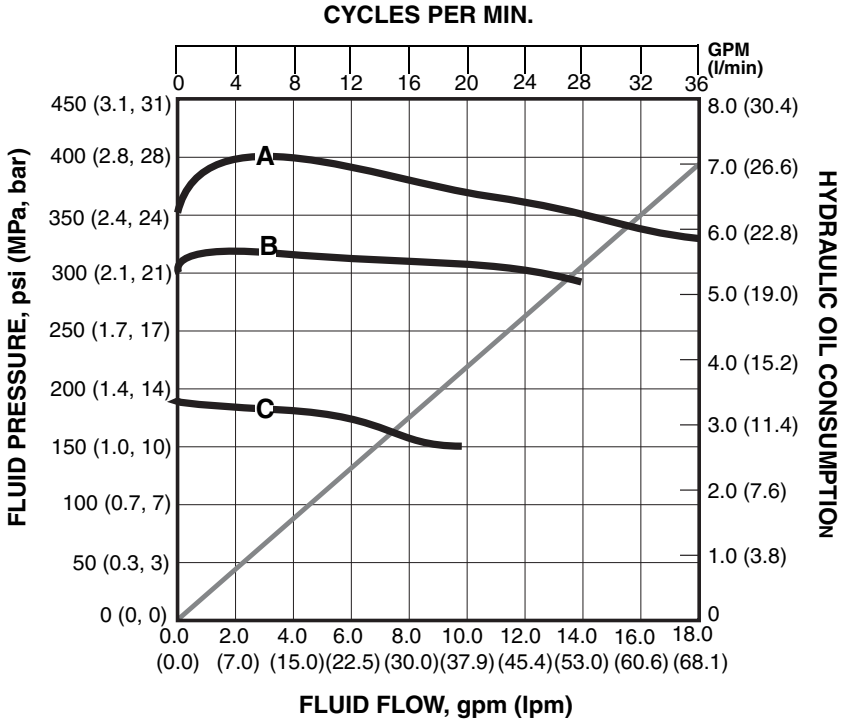
Key:
A 10.3 MPa, 103 bar (1500 psi) hydraulic pressure
B 7.2 MPa, 72.4 bar (1050 psi) hydraulic pressure
C 4.1 MPa, 41 bar (600 psi) hydraulic pressure

Hydraulic Oil Consumption

To find motor hydraulic oil consumption (l/min. or gpm) at a specific fluid flow (l/min. or gpm):

1. Locate desired flow along bottom of chart.
2. Read vertical line up to intersection with hydraulic oil consumption curve (dashes or gray line). Follow right to scale to read hydraulic oil consumption.

Viscount II Motor, 2000cc Lower



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Original instructions. This manual contains English. MM 311876

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